



Honeywell Technology Solutions Inc.

Goddard Corporate Park

Lanham, Maryland 20706-2291

TRACKING DATA EVALUATION REPORT FOR STS-119 and ISS

Daily Period: Mar 18 at 231025 GMT through Mar 19 at 234010 GMT
Mission Period: Mar 14 at 000000 GMT through Mar 18 at 234010 GMT

1. EXECUTIVE SUMMARY

This report summarizes all GN and SN tracking data for ISS and STS (except for ISS one-way Doppler data) since the beginning of mission support for STS-119. The executive summary of this report provides a daily overview of the number of passes received for ISS and STS as well as a daily summary of significant tracking data anomalies. The remainder of this report provides a detailed cumulative mission summary of all GN and SN tracking data for ISS and STS.

The C-band tracking support for ISS started on March 14, 2009. STS-119 was launched on March 15, 2009 at 234344 GMT. STS-119 docked with ISS on March 17 at 212000 GMT.

Ten STS C-band passes from FRCF, WL2F, and WLPQ were received during the daily reporting period. All of the STS C-band passes during the daily reporting period had nominal angle and range tracking data.

Four 1-way STS S-band passes from AGO3 and MILA were received during the daily reporting period. All of the 1-way STS S-band passes during the daily reporting period had nominal angle tracking data.

One 2-way STS S-band pass from MILA was received during the daily reporting period. The MILA pass taken on March 19 from 080500 through 081510 GMT had an x-angle mean of -0.062 deg. The y-angle, range, and range-rate tracking data during this pass was nominal

The cumulative mission percentages of anomalous SN TDRS-3, TDRS-4, TDRS-5, TDRS-6, and TDRS-10 tracking data for STS-119 are 1.4, 2.2, 2.4, 0.8, and 3.0 respectively. The anomalous SN tracking data has consisted of various Doppler drifts, biases, and/or spikes.

No significant tracking data problems were noted for ISS during the daily reporting period. One significant tracking data problem was noted for STS-119 during the daily reporting period. The MILA pass taken on March 19 at 080500 had an x-angle mean of -0.062 deg. No other tracking data problems were noted for STS-119 during the daily reporting period.

2. INTRODUCTION

This memorandum, which is produced by the Metric Tracking Data Evaluation (MTDE) Task located within the Flight Dynamics Facility (FDF) at Goddard Space Flight Center (GSFC), provides a Ground Network (GN) and Space Network (SN) tracking data evaluation report for the Space Transportation System (STS) and for the International Space Station (ISS). This report includes information about data processing, network validation, and network calibration for STS and ISS missions.

3. DATA PROCESSING

The metric tracking data evaluated for this report was processed using the Goddard Trajectory Determination System (GTDS), which is the primary orbit determination system used by the FDF. This system produces Observed minus Computed (O-C) values by comparing actual tracker measurements with computed measurements derived from weighted least-squares orbital solutions. Orbital solutions for ISS are derived by using 24 hours of C-band range tracking data as well as SN two-way range and Doppler tracking data if available. Orbital solutions for STS are derived by using one revolution (approximately 96 minutes) of SN two-way Doppler tracking data, GN S-band range and two-way range-rate tracking data, and C-band range tracking data.

4. NETWORK VALIDATION

The validation of metric tracking data is the process of determining the quality of tracking data measurements received from the trackers. The output from the GTDS orbital solutions is evaluated to assess the accuracy and usefulness of the tracking data. The O-C values (also known as residuals) and the amount of data edited from the orbital solutions (a 3-sigma edit criterion is normally used) are statistically analyzed to identify data anomalies and to assess the overall network tracking performance. Tracking data anomalies are identified and noted in this report. Anomalous tracking data as well as tracking data that is flagged invalid by the tracker is generally not used for orbit determination.

5. NETWORK CALIBRATION

The calibration of metric tracking data is the process of using statistical evaluation techniques to determine tracker and network performance. Anomalous tracking data as well as tracking data that is flagged invalid by the tracker is generally not used for network calibration. Calibration parameters for each tracker, which are computed from the GTDS calibration O-C statistics for each pass, are defined as follows:

Tracker Mean: A weighted sample mean of pass O-C means. The tracker mean is an estimate of the bias in the measurements.

Deviation: A weighted 2-sigma sample standard deviation (SD) of pass O-C means about the tracker mean. A Student's t correction for small sample size is applied when necessary. If there are fewer than four passes for a tracker, the deviation is not computed. The deviation is a measure of the bias consistency.

Average Pass SD: A weighted Root Mean Square (rms) of pass O-C standard deviations. This parameter provides an upper limit for the average pass system noise.

Root Sum Square: The Root Sum Square (rss) of the tracker mean, half the deviation, and the average pass SD. This parameter is an estimate of the average measurement error. The rss is not computed if there are fewer than four passes for a tracker.

All of these statistical parameters are weighted by the number of points in each pass.

6. GN TRACKING DATA EVALUATION CRITERIA

GN S-band tracking data for STS is comprised of x-angle, y-angle, range and range-rate tracking data. GN C-band tracking data for STS and ISS is comprised of azimuth angle, elevation angle, and range tracking data.

S-band and C-band GN tracking data taken below 7° in elevation is not used for orbit determination or for network calibration. Poor quality x-angle or azimuth angle tracking data taken in antenna keyhole regions (where the absolute value of the y-angle is greater than or equal to 70° for X-Y antennas or the absolute value of the elevation angle is greater than or equal to 70° for Az-EI antennas) is not considered anomalous. Tracking data received during periods of antenna masking is excluded from the tracker calibration statistics and is not considered anomalous.

S-band GN angle tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to 0.05°. C-band GN angle tracking data is generally considered to be anomalous if more than 20 percent of the angle data flagged valid has residuals greater than or equal to 0.10°. S-band GN range tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to 20 meters. C-band GN range tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to 50 meters. S-band 2-way GN range-rate tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to greater than 0.5 meters per second.

Occasionally a C-band tracker will track the wrong target vehicle when STS and ISS are in very close proximity to each other. This pass will be identified in the FDF reports with the name of the intended target vehicle. If no usable tracking data is received from the intended target vehicle, then this pass will be identified as an anomalous pass.

7. SN TRACKING DATA EVALUATION CRITERIA

SN tracking data for ISS is comprised of one-way S-band and K-band Doppler tracking data. Only the one-way S-band Doppler tracking data is used in the orbit determination process for ISS. The ISS one-way S-band Doppler tracking data residuals, which measure the offset from the nominal frequency of the ISS transponder, are generally considered nominal as long as the residuals are less than 700 Hertz. Reports are generated by the FDF on a weekly and monthly basis that summarize the frequency offset for the ISS transponders. If the frequency offset exceeds 700 Hertz, FDF personnel will issue a report recommending an adjustment to the forward and transmit frequencies for ISS.

If 2-way SN tracking of ISS is available, then the FDF will use the coherent range and Doppler tracking data as well as C-band tracking data for orbit determination purposes.

SN tracking data for STS is comprised of two-way S-band Doppler tracking data. The Doppler tracking data for STS is used for determining the quality of the tracking service. Each Doppler tracking data observation is evaluated and categorized as usable, as anomalous, or as invalid. An invalid observation is one that has been flagged as invalid in the tracking data message (TDM) at White Sands Complex (WSC). Each tracking data event is rated as a success or as a failure. A success is a tracking data event that has at least 70 percent usable Doppler tracking data. A failure is an event that has less than 70 percent usable Doppler data.

8. GN TRACKING DATA PASSES

The following table lists the number of daily and mission S-band and C-band passes received from each tracker for both ISS and STS having a maximum elevation of at least 7°. Only passes with a maximum elevation of at least 7° are used by the FDF for orbit determination and anomaly reporting. The number of passes listed in this table may not agree with the actual number of passes scheduled.

Tracker	ISS		STS-119	
	Daily	Mission	Daily	Mission
AGO3	0	0	2	7
ANTQ	0	3	0	1
ASCQ	0	6	0	1
EAFF	0	6	0	3
FRCF	0	7	4	12
KMRF	0	0	0	1
MIL3	0	0	0	6
MILA	0	0	5	8
WL2F	0	10	2	10
WLPQ	0	5	4	10
TOTALS	0	37	17	59

9. GN TRACKING DATA ANOMALIES

The following table contains a chronological listing of all GN tracking data anomalies for both ISS and STS for the entire mission. Tracking data anomalies are only reported for passes having a maximum elevation above 7°. Tracking data in the keyhole region or tracking data affected by station masking is not considered anomalous.

Start	Stop	Tracker	Satellite	Comments
20090319/080500	20090319/081510	MILA	STS-119	Angle1 mean = -0.062 deg, sd = 0.017 deg, 66.7% anomalous.

10. GN STATISTICS

The following report provides GN tracking data residual statistics for both ISS and STS. Statistics, consisting of mean, standard deviation and number of points, are computed for each pass for angle, range, and range-rate tracking data residuals. The statistics are summarized for each tracking station for each satellite. The statistics are computed for two different time intervals. The first time interval corresponds to the tracking data summarized on a daily basis. The second time interval corresponds to the tracking data summarized for the entire mission. Group statistics, consisting of mean, deviation, average pass standard deviation, and rss, are also computed for each tracker for both ISS and STS.

FLIGHT DYNAMICS FACILITY GN STATISTICS PROGRAM

20090318/231018 = START TIME FOR STATISTICS INTERVAL 1
20090319/234010 = STOP TIME FOR STATISTICS INTERVAL 1

20090314/000000 = START TIME FOR STATISTICS INTERVAL 2
20090319/234010 = STOP TIME FOR STATISTICS INTERVAL 2

LO SPEED TRACKING DATA

N = INCLUDE TT&C DATA (Y/N)

SATELLITE(S)
ISS
STS-119

STATION(S)
ALL

STATISTICS INTERVAL 1

STATION = AGO3 SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090319/162000	20090319/162910	0.035	0.016	11	100.0	-0.014	0.010	20	100.0	-----	-----	0	0.0	-----	----- 0 0.0 1
20090319/175500	20090319/180610	0.015	0.031	36	97.2	-0.012	0.013	36	100.0	-----	-----	0	0.0	-----	----- 0 0.0 1

STATION = AGO3 SATELLITE = STS-119

RESIDUALS						VDNA NOISE						RATING					
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY					
ANGLE 1 (DEG)	0.020	-----	0.028	-----	47	2	0.0087	0.0093	0.0089	2	2	97.9					
ANGLE 2 (DEG)	-0.013	-----	0.012	-----	56	2	0.0026	0.0062	0.0054	2	2	100.0					
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0					
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0					

STATION = AGO3 SATELLITE = STS-119 SUMMARY

STATION = FRCF SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A M ANOMALY C
20090319/013024	20090319/014224	0.001	0.005	63 100.0	-0.001	0.008	68 100.0	7.695	27.966	68 95.6	-----	-----	-----	-----	0	0.0	0	0.0	0
20090319/030706	20090319/031712	-0.004	0.010	34 100.0	-0.017	0.012	34 100.0	2.708	22.069	34 94.1	-----	-----	-----	-----	0	0.0	0	0.0	0
20090319/075648	20090319/080748	-0.005	0.005	57 100.0	0.003	0.010	57 100.0	3.883	13.663	57 100.0	-----	-----	-----	-----	0	0.0	0	0.0	0
20090319/093200	20090319/094306	-0.002	0.006	60 100.0	0.005	0.007	60 100.0	6.298	17.401	60 100.0	-----	-----	-----	-----	0	0.0	0	0.0	0

STATION = FRCF SATELLITE = STS-119

RESIDUALS					VDNA NOISE					RATING								
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY					
ANGLE 1 (DEG)	-0.002	0.009	0.006	0.008	214	4	0.0020	0.0098	0.0048	4	4	100.0						
ANGLE 2 (DEG)	-0.001	0.027	0.009	0.016	219	4	0.0042	0.0084	0.0057	4	4	100.0						
RANGE (M)	5.546	6.932	21.218	22.203	219	4	7.2020	13.9681	11.0868	4	4	97.7						
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0						

STATION = FRCF SATELLITE = STS-119 SUMMARY

STATION = MILA SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A M ANOMALY C
20090319/000200	20090319/001210	-----	-----	0 0.0	-----	-----	-----	0 0.0	-----	-----	0 0.0	-----	-----	-----	0	0.0	1	0.0	1
20090319/063120	20090319/063850	-0.004	0.022	35 97.1	-0.009	0.007	35 100.0	1.775	3.819	31 100.0	0.006	0.016	35 100.0	2					
20090319/080500	20090319/081510	-0.062	0.017	9 33.3 A	0.010	0.002	9 100.0	-----	-----	0 0.0	-----	-----	0 0.0	1 Anomaly					
20090319/211940	20090319/212900	-0.010	0.012	19 100.0	-0.002	0.012	28 100.0	-----	-----	0 0.0	-----	-----	0 0.0	1					
20090319/225300	20090319/230410	0.019	0.008	19 100.0	-0.010	0.007	19 100.0	-----	-----	0 0.0	-----	-----	0 0.0	1					

STATION = MILA SATELLITE = STS-119

RESIDUALS					VDNA NOISE					RATING								
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY					
ANGLE 1 (DEG)	-0.006	0.082	0.017	0.045	82	4	0.0064	0.0185	0.0096	4	5	91.5						
ANGLE 2 (DEG)	-0.005	0.022	0.009	0.015	91	4	0.0022	0.0066	0.0050	4	5	100.0						
RANGE (M)	1.775	-----	3.819	-----	31	1	1.3892	1.3892	1.3892	1	5	100.0						
RANGE-RATE (M/S)	0.006	-----	0.016	-----	35	1	0.0012	0.0012	0.0012	1	5	100.0						

STATION = MILA SATELLITE = STS-119 SUMMARY

STATION = WL2F SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)								ANGLE 2 RESIDUALS (DEG)								RANGE RESIDUALS (M)								RANGE-RATE RESIDUALS (M/S)							
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A	M	ANOMALY C					
20090319/212000	20090319/213112	0.001	0.014	42	100.0	0.012	0.015	42	100.0	-0.764	12.949	42	100.0	-	-	-	-	-	-	-	-	0	0.0	0							
20090319/225354	20090319/230654	-0.000	0.010	67	100.0	-0.002	0.013	67	100.0	3.776	14.435	67	100.0	-	-	-	-	-	-	-	-	0	0.0	0							

STATION = WL2F SATELLITE = STS-119

RESIDUALS								VDNA NOISE								RATING									
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.000	-----	0.012	-----	109	2	0.0026	0.0115	0.0081	2	2	100.0	ANGLE 2 (DEG)	0.003	-----	0.014	-----	109	2	0.0039	0.0150	0.0103	2	2	100.0
RANGE (M)	2.027	-----	13.884	-----	109	2	6.7806	7.9121	7.5258	2	2	100.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0

STATION = WL2F SATELLITE = STS-119 SUMMARY

STATION = WLPQ SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)								ANGLE 2 RESIDUALS (DEG)								RANGE RESIDUALS (M)								RANGE-RATE RESIDUALS (M/S)							
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A	M	ANOMALY C					
20090319/000336	20090319/001524	-0.003	0.003	58	100.0	0.005	0.002	58	100.0	-13.768	16.231	58	98.3	-	-	-	-	-	-	-	-	0	0.0	0							
20090319/031654	20090319/032730	-0.004	0.002	4	100.0	0.009	0.003	4	100.0	10.162	21.703	4	100.0	-	-	-	-	-	-	-	-	0	0.0	0							
20090319/045218	20090319/050442	-0.003	0.004	60	100.0	0.006	0.003	60	100.0	3.335	11.611	60	100.0	-	-	-	-	-	-	-	-	0	0.0	0							
20090319/062748	20090319/064012	-0.001	0.002	62	100.0	0.004	0.003	62	100.0	2.907	14.456	62	100.0	-	-	-	-	-	-	-	-	0	0.0	0							

STATION = WLPQ SATELLITE = STS-119

RESIDUALS								VDNA NOISE								RATING									
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.002	0.004	0.003	0.004	184	4	0.0014	0.0037	0.0017	4	4	100.0	ANGLE 2 (DEG)	0.005	0.004	0.003	0.006	184	4	0.0011	0.0043	0.0015	4	4	100.0
RANGE (M)	-2.052	29.454	14.363	20.673	184	4	7.9071	29.2244	9.2766	4	4	99.5	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0

STATION = WLPQ SATELLITE = STS-119 SUMMARY

COMBINED STATISTICS FOR EACH STATION

STATION = AGO3
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.020	-----	0.028	-----	47	2	0.0087	0.0093	0.0089	2	2	97.9	
ANGLE 2 (DEG)	-0.013	-----	0.012	-----	56	2	0.0026	0.0062	0.0054	2	2	100.0	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0	

COMBINED STATISTICS SUMMARY FOR AGO3

STATION = FRCF
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.002	0.009	0.006	0.008	214	4	0.0020	0.0098	0.0048	4	4	100.0	
ANGLE 2 (DEG)	-0.001	0.027	0.009	0.016	219	4	0.0042	0.0084	0.0057	4	4	100.0	
RANGE (M)	5.546	6.932	21.218	22.203	219	4	7.2020	13.9681	11.0868	4	4	97.7	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0	

COMBINED STATISTICS SUMMARY FOR FRCF

STATION = MILA
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.006	0.082	0.017	0.045	82	4	0.0064	0.0185	0.0096	4	5	91.5	
ANGLE 2 (DEG)	-0.005	0.022	0.009	0.015	91	4	0.0022	0.0066	0.0050	4	5	100.0	
RANGE (M)	1.775	-----	3.819	-----	31	1	1.3892	1.3892	1.3892	1	5	100.0	
RANGE-RATE (M/S)	0.006	-----	0.016	-----	35	1	0.0012	0.0012	0.0012	1	5	100.0	

COMBINED STATISTICS SUMMARY FOR MILA

STATION = WL2F
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY

ANGLE 1 (DEG)	0.000	-----	0.012	-----	109	2	0.0026	0.0115	0.0081	2	2	100.0
ANGLE 2 (DEG)	0.003	-----	0.014	-----	109	2	0.0039	0.0150	0.0103	2	2	100.0
RANGE (M)	2.027	-----	13.884	-----	109	2	6.7806	7.9121	7.5258	2	2	100.0
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0

COMBINED STATISTICS SUMMARY FOR WL2F

STATION = WLPQ
SATELLITE = STS-119

	RESIDUALS					VDNA NOISE					RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.002	0.004	0.003	0.004	184	4	0.0014	0.0037	0.0017	4	4	100.0	
ANGLE 2 (DEG)	0.005	0.004	0.003	0.006	184	4	0.0011	0.0043	0.0015	4	4	100.0	
RANGE (M)	-2.052	29.454	14.363	20.673	184	4	7.9071	29.2244	9.2766	4	4	99.5	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0	

COMBINED STATISTICS SUMMARY FOR WLPQ

STATISTICS INTERVAL 2

STATION = AGO3 SATELLITE = STS-119

	ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)						
	MEAN	SD	PTS	%USE	A	MEAN	SD	PTS	%USE	A	MEAN	SD	PTS	%USE	A	MEAN	SD	PTS	%USE	A	M	ANOMALY
20090316/184240	20090316/185030	0.031	0.013	31	100.0	-0.014	0.007	31	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		
20090317/170330	20090317/170950	0.066	0.011	8	100.0	-0.028	0.011	16	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		
20090317/183600	20090317/185140	0.040	0.034	42	90.5	-0.017	0.010	42	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		
20090318/172810	20090318/173750	0.042	0.014	34	100.0	-0.019	0.010	34	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		
20090318/190410	20090318/191350	-0.009	0.016	22	100.0	-0.008	0.016	28	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		
20090319/162000	20090319/162910	0.035	0.016	11	100.0	-0.014	0.010	20	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		
20090319/175500	20090319/180610	0.015	0.031	36	97.2	-0.012	0.013	36	100.0	-----	-----	0	0.0	-----	-----	0	0.0	0	0.0	1		

STATION = AGO3 SATELLITE = STS-119

	RESIDUALS					VDNA NOISE					RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.029	0.048	0.024	0.045	184	7	0.0029	0.0111	0.0081	7	7	97.3	
ANGLE 2 (DEG)	-0.015	0.013	0.011	0.020	207	7	0.0026	0.0087	0.0060	7	7	100.0	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	

STATION = AGO3 SATELLITE = STS-119 SUMMARY

STATION = ANTQ SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090315/210306 20090315/211554	0.004	0.003	58 100.0	-0.004	0.006	58 100.0	-1.885	6.326	58 100.0	-----	-----	-----	0 0.0 0		
20090315/223848 20090315/225036	0.005	0.002	41 100.0	-0.003	0.005	41 100.0	-2.425	8.166	41 100.0	-----	-----	-----	0 0.0 0		
20090317/202342 20090317/203448	0.001	0.003	62 100.0	-0.008	0.004	62 100.0	-2.423	21.014	62 100.0	-----	-----	-----	0 0.0 0		

STATION = ANTQ SATELLITE = ISS

RESIDUALS				VDNA NOISE				RATING				
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.003	-----	0.003	161	3	0.0012	0.0014	0.0013	3	3	100.0	
ANGLE 2 (DEG)	-0.005	-----	0.005	161	3	0.0013	0.0057	0.0040	3	3	100.0	
RANGE (M)	-2.230	-----	14.206	161	3	4.5078	8.6083	6.1131	3	3	100.0	
RANGE-RATE (M/S)	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	

STATION = ANTQ SATELLITE = ISS SUMMARY

STATION = ANTQ SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090317/220012 20090317/220924	0.005	0.002	31 100.0	-0.001	0.008	31 100.0	4.080	6.238	31 100.0	-----	-----	-----	0 0.0 0		

STATION = ANTQ SATELLITE = STS-119

RESIDUALS				VDNA NOISE				RATING				
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.005	-----	0.002	31	1	0.0008	0.0008	0.0008	1	1	100.0	
ANGLE 2 (DEG)	-0.001	-----	0.008	31	1	0.0040	0.0040	0.0040	1	1	100.0	
RANGE (M)	4.080	-----	6.238	31	1	2.5367	2.5367	2.5367	1	1	100.0	
RANGE-RATE (M/S)	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	

STATION = ANTQ SATELLITE = STS-119 SUMMARY

STATION = ASCQ SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090315/162100 20090315/163148	0.002	0.005	41 100.0	0.010	0.006	41 100.0	3.803	14.491	41 100.0	-----	-----	-----	0 0.0 0		
20090315/175618 20090315/180736	-0.001	0.005	51 100.0	0.010	0.006	51 100.0	5.682	17.247	51 98.0	-----	-----	-----	0 0.0 0		

20090316/164730	20090316/170000	0.001	0.004	65	100.0	0.002	0.004	69	100.0	9.381	10.478	69	100.0	-----	-----	0	0.0	0
20090317/055206	20090317/060324	-0.000	0.002	64	100.0	0.007	0.005	64	100.0	6.270	15.406	64	100.0	-----	-----	0	0.0	0
20090317/154006	20090317/155148	0.003	0.004	50	100.0	-0.003	0.007	50	100.0	6.611	17.052	50	98.0	-----	-----	0	0.0	0
20090317/171506	20090317/172606	-0.000	0.005	48	100.0	0.012	0.008	48	100.0	1.674	14.318	48	100.0	-----	-----	0	0.0	0

STATION = ASCQ SATELLITE = ISS

	RESIDUALS					VDNA NOISE					RATING					
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	0.001	0.004	0.004	0.005	319	6	0.0004	0.0037	0.0025	6	6	100.0				
ANGLE 2 (DEG)	0.006	0.014	0.006	0.011	323	6	0.0004	0.0043	0.0029	6	6	100.0				
RANGE (M)	5.898	6.849	14.815	16.309	323	6	7.6611	17.6598	13.6348	6	6	99.4				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0				

STATION = ASCQ SATELLITE = ISS SUMMARY

STATION = ASCQ SATELLITE = STS-119

	ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090316/172206	20090316/173218	0.001	0.005	47	100.0	0.013	0.005	47	100.0	-3.518	10.507	47	100.0	-----	-----	0	0.0	0		

STATION = ASCQ SATELLITE = STS-119

	RESIDUALS					VDNA NOISE					RATING					
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	0.001	-----	0.005	-----	47	1	0.0018	0.0018	0.0018	1	1	100.0				
ANGLE 2 (DEG)	0.013	-----	0.005	-----	47	1	0.0012	0.0012	0.0012	1	1	100.0				
RANGE (M)	-3.518	-----	10.507	-----	47	1	5.1062	5.1062	5.1062	1	1	100.0				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0				

STATION = ASCQ SATELLITE = STS-119 SUMMARY

STATION = EAFF SATELLITE = ISS

	ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090316/014512	20090316/015600	0.006	0.009	54	100.0	-0.000	0.006	54	100.0	-1.350	23.546	54	98.1	-----	-----	0	0.0	0		
20090316/031954	20090316/033130	0.000	0.006	63	100.0	-0.005	0.011	63	100.0	1.078	17.255	63	98.4	-----	-----	0	0.0	0		
20090316/094554	20090316/095730	-0.001	0.006	67	100.0	-0.004	0.007	67	100.0	5.283	19.621	66	97.0	-----	-----	0	0.0	0		
20090316/112142	20090316/113106	0.003	0.011	29	100.0	-0.000	0.006	29	100.0	8.596	18.289	29	100.0	-----	-----	0	0.0	0		
20090317/021130	20090317/022330	-0.005	0.015	62	100.0	-0.003	0.008	68	100.0	0.889	16.182	68	98.5	-----	-----	0	0.0	0		
20090317/083742	20090317/084842	-0.004	0.008	55	100.0	-0.004	0.009	55	100.0	12.229	24.073	55	90.9	-----	-----	0	0.0	0		

STATION = EAFF SATELLITE = ISS

RESIDUALS

VDNA NOISE

RATING

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	0.011	0.010	0.011	330	6	0.0050	0.0113	0.0071	6	6	100.0	
ANGLE 2 (DEG)	-0.003	0.005	0.008	0.009	336	6	0.0049	0.0063	0.0055	6	6	100.0	
RANGE (M)	3.958	13.045	19.960	21.368	335	6	12.6056	19.2360	15.8974	6	6	97.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	

STATION = EAFF SATELLITE = ISS SUMMARY

STATION = EAFF SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A M ANOMALY C
20090317/102300	20090317/103212	0.002	0.008	41	100.0	0.000	0.010	41	100.0	4.919	8.572	41	100.0	-----	0 0.0 0
20090318/010354	20090318/011506	0.007	0.009	59	100.0	-0.003	0.008	59	100.0	9.899	25.224	59	89.8	-----	0 0.0 0
20090318/104054	20090318/104954	0.013	0.015	5	100.0	0.000	0.006	5	100.0	-19.822	11.403	5	100.0	-----	0 0.0 0

STATION = EAFF SATELLITE = STS-119

RESIDUALS						VDNA NOISE						RATING					
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY				
ANGLE 1 (DEG)	0.005	-----	0.009	-----	105	3	0.0048	0.0062	0.0054	3	3	100.0					
ANGLE 2 (DEG)	-0.002	-----	0.009	-----	105	3	0.0029	0.0064	0.0047	3	3	100.0					
RANGE (M)	6.539	-----	19.892	-----	105	3	4.8630	15.3513	12.4666	3	3	94.3					
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0					

STATION = EAFF SATELLITE = STS-119 SUMMARY

STATION = FRCF SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A M ANOMALY C
20090315/025224	20090315/030424	-0.007	0.009	68	100.0	0.002	0.008	68	100.0	0.596	13.666	68	98.5	-----	0 0.0 0
20090315/042848	20090315/043924	-0.009	0.007	43	100.0	-0.008	0.010	43	100.0	4.110	21.786	43	100.0	-----	0 0.0 0
20090315/091854	20090315/092936	-0.003	0.010	52	100.0	0.003	0.014	52	100.0	7.250	23.588	52	96.2	-----	0 0.0 0
20090315/105354	20090315/110530	-0.002	0.008	65	100.0	0.006	0.010	65	100.0	2.510	18.589	65	98.5	-----	0 0.0 0
20090316/081100	20090316/082018	-0.000	0.009	17	100.0	-0.004	0.015	17	100.0	4.725	20.383	17	100.0	-----	0 0.0 0
20090317/034800	20090317/035818	-0.008	0.011	39	100.0	-0.016	0.016	39	100.0	11.056	23.055	39	97.4	-----	0 0.0 0
20090317/101254	20090317/102424	0.001	0.007	63	100.0	0.002	0.010	63	100.0	-5.726	24.086	63	96.8	-----	0 0.0 0

STATION = FRCF SATELLITE = ISS SUMMARY

RESIDUALS						VDNA NOISE						RATING					
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY				

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.004	0.009	0.009	0.011	347	7	0.0044	0.0115	0.0065	7	7	100.0	
ANGLE 2 (DEG)	-0.001	0.018	0.011	0.015	347	7	0.0064	0.0142	0.0100	7	7	100.0	
RANGE (M)	2.617	13.256	20.705	21.897	347	7	12.8557	23.6165	17.8628	7	7	98.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	

STATION = FRCF SATELLITE = ISS SUMMARY

STATION = FRCF SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)					
MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A M ANOMALY C		
20090316/024224	20090316/025118	-0.002	0.006	39	100.0	0.005	0.006	41	100.0	1.453	9.421	41	100.0	-----	-----	0	0.0 0
20090316/085800	20090316/090724	-0.006	0.008	31	100.0	0.002	0.011	31	100.0	4.330	8.320	31	100.0	-----	-----	0	0.0 0
20090316/103100	20090316/104042	0.001	0.010	48	100.0	0.002	0.013	48	100.0	0.920	10.759	47	97.9	-----	-----	0	0.0 0
20090317/023212	20090317/024254	-0.009	0.012	55	100.0	-0.006	0.018	55	100.0	5.542	11.876	55	100.0	-----	-----	0	0.0 0
20090317/084954	20090317/085912	-0.006	0.009	41	100.0	0.002	0.015	41	100.0	-4.942	10.719	41	100.0	-----	-----	0	0.0 0
20090318/023900	20090318/025024	-0.004	0.006	61	100.0	-0.006	0.013	61	100.0	-1.497	18.899	61	100.0	-----	-----	0	0.0 0
20090318/072942	20090318/073930	-0.000	0.008	26	100.0	0.005	0.025	26	96.2	6.504	14.340	26	100.0	-----	-----	0	0.0 0
20090318/090442	20090318/091624	-0.002	0.007	67	100.0	0.002	0.007	67	100.0	10.162	20.151	67	95.5	-----	-----	0	0.0 0
20090319/013024	20090319/014224	0.001	0.005	63	100.0	-0.001	0.008	68	100.0	7.695	27.966	68	95.6	-----	-----	0	0.0 0
20090319/030706	20090319/031712	-0.004	0.010	34	100.0	-0.017	0.012	34	100.0	2.708	22.069	34	94.1	-----	-----	0	0.0 0
20090319/075648	20090319/080748	-0.005	0.005	57	100.0	0.003	0.010	57	100.0	3.883	13.663	57	100.0	-----	-----	0	0.0 0
20090319/093200	20090319/094306	-0.002	0.006	60	100.0	0.005	0.007	60	100.0	6.298	17.401	60	100.0	-----	-----	0	0.0 0

STATION = FRCF SATELLITE = STS-119

RESIDUALS				VDNA NOISE				RATING					
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	
ANGLE 1 (DEG)	-0.003	0.007	0.008	0.009	582	12	0.0020	0.0098	0.0045	12	12	100.0	
ANGLE 2 (DEG)	-0.000	0.013	0.012	0.014	589	12	0.0034	0.0124	0.0066	12	12	99.8	
RANGE (M)	3.933	9.468	17.347	18.406	588	12	3.5909	14.5848	9.8310	12	12	98.5	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	12	0.0	

STATION = FRCF SATELLITE = STS-119 SUMMARY

STATION = KMRF SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)					
MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A	MEAN	DEV	SD	PTS %USE A M ANOMALY C		
20090317/162712	20090317/163842	0.002	0.015	52	100.0	-0.022	0.039	52	96.2	-0.080	7.033	52	100.0	-----	-----	0	0.0 0

STATION = KMRF SATELLITE = STS-119

RESIDUALS				VDNA NOISE				RATING				
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	-----	0.015	-----	52	1	0.0118	0.0118	0.0118	1	1	100.0	
ANGLE 2 (DEG)	-0.022	-----	0.039	-----	52	1	0.0195	0.0195	0.0195	1	1	96.2	
RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	

STATION = KMRF SATELLITE = STS-119 SUMMARY

STATION = MIL3 SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
	MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A M ANOMALY C
20090316/073300	20090316/074300	0.021	0.008 10 100.0	-0.008	0.006	14 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090316/090620	20090316/091420	0.012	0.009 7 100.0	0.007	0.005	7 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090316/233210	20090316/234300	0.010	0.026 25 96.0	-0.010	0.013	25 96.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090317/072440	20090317/073430	0.010	0.017 14 100.0	-0.005	0.006	15 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090317/215200	20090317/221000	-0.021	0.020 17 76.5	-0.040	0.022	20 85.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090317/233400	20090317/234520	-0.004	0.014 21 100.0	-0.033	0.016	31 83.9	-----	-----	0	0.0	-----	-----	0	0.0	1

STATION = MIL3 SATELLITE = STS-119

RESIDUALS								VDNA NOISE								RATING							
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY		MEAN	SD	PTS	%USE	A M	ANOMALY C			
ANGLE 1 (DEG)	0.003	0.037	0.019	0.027	94	6	0.0058	0.0152	0.0114	6	6	94.7	-----	-----	-----	-----	-----	0	0.0	1			
ANGLE 2 (DEG)	-0.020	0.043	0.014	0.033	112	6	0.0023	0.0085	0.0061	6	6	92.0	-----	-----	-----	-----	-----	0	0.0	1			
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	-----	-----	-----	-----	-----	0	0.0	1			
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	-----	-----	-----	-----	-----	0	0.0	1			

STATION = MIL3 SATELLITE = STS-119 SUMMARY

STATION = MILA SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
	MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A M ANOMALY C
20090318/060300	20090318/061140	0.019	0.016 12 100.0	-0.009	0.010	12 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090318/073700	20090318/074840	-0.005	0.012 26 100.0	0.000	0.008	26 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090318/222500	20090318/223730	0.016	0.017 41 100.0	-0.011	0.006	41 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090319/000200	20090319/001210	-----	----- 0 0.0	-----	-----	0 0.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090319/063120	20090319/063850	-0.004	0.022 35 97.1	-0.009	0.007	35 100.0	1.775	3.819	31 100.0	0.006	0.016	35 100.0	2	-----	-----
20090319/080500	20090319/081510	-0.062	0.017 9 33.3 A	0.010	0.002	9 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1 Anomaly
20090319/211940	20090319/212900	-0.010	0.012 19 100.0	-0.002	0.012	28 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090319/225300	20090319/230410	0.019	0.008 19 100.0	-0.010	0.007	19 100.0	-----	-----	0	0.0	-----	-----	0	0.0	1

STATION = MILA SATELLITE = STS-119

RESIDUALS								VDNA NOISE								RATING							
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY		MEAN	SD	PTS	%USE	A M	ANOMALY C			
ANGLE 1 (DEG)	0.003	0.037	0.019	0.027	94	6	0.0058	0.0152	0.0114	6	6	94.7	-----	-----	-----	-----	-----	0	0.0	1			
ANGLE 2 (DEG)	-0.020	0.043	0.014	0.033	112	6	0.0023	0.0085	0.0061	6	6	92.0	-----	-----	-----	-----	-----	0	0.0	1			
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	-----	-----	-----	-----	-----	0	0.0	1			
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	-----	-----	-----	-----	-----	0	0.0	1			

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	0.051	0.016	0.030	161	7	0.0064	0.0185	0.0088	7	8	95.7	
ANGLE 2 (DEG)	-0.006	0.015	0.008	0.013	170	7	0.0022	0.0102	0.0057	7	8	100.0	
RANGE (M)	1.775	-----	3.819	-----	31	1	1.3892	1.3892	1.3892	1	8	100.0	
RANGE-RATE (M/S)	0.006	-----	0.016	-----	35	1	0.0012	0.0012	0.0012	1	8	100.0	

STATION = MILA SATELLITE = STS-119 SUMMARY

	ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C	
20090314/234942	20090314/235954	0.005	0.010	61	100.0	0.009	0.009	61	100.0	10.487	12.620	61	100.0	-----	-----	0	0.0 0
20090315/012454	20090315/013718	0.000	0.015	60	100.0	-0.004	0.013	60	100.0	-3.406	10.030	60	100.0	-----	-----	0	0.0 0
20090315/030206	20090315/031242	0.003	0.018	13	100.0	-0.006	0.021	13	100.0	-10.562	17.840	13	100.0	-----	-----	0	0.0 0
20090315/061424	20090315/062618	-0.000	0.011	56	100.0	0.003	0.014	56	100.0	3.476	17.412	56	100.0	-----	-----	0	0.0 0
20090315/074936	20090315/080136	0.002	0.011	65	100.0	0.001	0.013	65	100.0	4.507	13.689	65	100.0	-----	-----	0	0.0 0
20090315/224206	20090315/225242	0.009	0.016	20	100.0	0.017	0.016	20	100.0	1.383	15.336	20	100.0	-----	-----	0	0.0 0
20090316/230824	20090316/231948	0.004	0.010	63	100.0	0.005	0.013	63	100.0	-3.008	11.670	63	100.0	-----	-----	0	0.0 0
20090317/004354	20090317/005512	0.003	0.012	60	100.0	-0.007	0.014	60	100.0	11.418	14.172	60	100.0	-----	-----	0	0.0 0
20090317/053324	20090317/054518	0.003	0.014	57	100.0	0.004	0.016	57	100.0	11.027	10.640	57	100.0	-----	-----	0	0.0 0
20090317/070824	20090317/072036	0.005	0.018	64	100.0	0.001	0.016	64	100.0	-4.904	13.268	64	100.0	-----	-----	0	0.0 0

STATION = WL2F SATELLITE = ISS

RESIDUALS

VDNA NOISE

RATING

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.003	0.005	0.013	0.014	519	10	0.0080	0.0226	0.0118	10	10	100.0	
ANGLE 2 (DEG)	0.002	0.013	0.014	0.016	519	10	0.0078	0.0221	0.0118	10	10	100.0	
RANGE (M)	3.128	15.760	13.310	15.781	519	10	9.4647	16.5704	11.4652	10	10	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	10	0.0	

STATION = WL2F SATELLITE = ISS SUMMARY

	ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C	
20090316/233342	20090316/234424	0.004	0.011	50	100.0	0.012	0.014	50	100.0	-0.159	6.687	50	100.0	-----	-----	0	0.0 0
20090317/010812	20090317/011718	0.004	0.012	32	100.0	-0.007	0.016	32	100.0	1.083	6.906	32	100.0	-----	-----	0	0.0 0
20090317/220100	20090317/221206	0.009	0.016	35	100.0	0.010	0.014	35	100.0	1.725	8.088	35	100.0	-----	-----	0	0.0 0
20090317/233524	20090317/234836	-0.001	0.010	68	100.0	-0.007	0.009	68	100.0	8.110	15.498	68	100.0	-----	-----	0	0.0 0
20090318/011206	20090318/012300	0.004	0.016	39	100.0	-0.009	0.015	39	100.0	4.719	15.558	39	100.0	-----	-----	0	0.0 0
20090318/042506	20090318/043642	0.000	0.016	41	100.0	-0.005	0.016	41	100.0	-0.602	10.682	41	100.0	-----	-----	0	0.0 0
20090318/060024	20090318/061224	-0.003	0.011	68	100.0	-0.007	0.014	68	100.0	3.131	16.975	68	100.0	-----	-----	0	0.0 0

20090318/073612	20090318/074706	0.007	0.021	25	100.0	-0.004	0.018	25	100.0	0.916	15.662	25	100.0	-----	-----	0	0.0	0
20090319/212000	20090319/213112	0.001	0.014	42	100.0	0.012	0.015	42	100.0	-0.764	12.949	42	100.0	-----	-----	0	0.0	0
20090319/225354	20090319/230654	-0.000	0.010	67	100.0	-0.002	0.013	67	100.0	3.776	14.435	67	100.0	-----	-----	0	0.0	0

STATION = WL2F SATELLITE = STS-119

	RESIDUALS					VDNA NOISE					RATING					
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	0.002	0.008	0.013	0.014	467	10	0.0026	0.0168	0.0092	10	10	100.0				
ANGLE 2 (DEG)	-0.001	0.019	0.014	0.017	467	10	0.0033	0.0154	0.0093	10	10	100.0				
RANGE (M)	2.687	6.798	13.360	14.045	467	10	2.9716	10.4371	7.7690	10	10	100.0				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	10	0.0				

STATION = WL2F SATELLITE = STS-119 SUMMARY

	ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090316/001624	20090316/002924	-0.000	0.005	66	100.0	0.005	0.005	69	100.0	2.886	13.354	69	100.0	-----	-----	0	0.0	0		
20090316/015600	20090316/020412	-0.003	0.003	42	100.0	0.010	0.004	42	100.0	-5.968	12.674	42	97.6	-----	-----	0	0.0	0		
20090316/050612	20090316/051736	-0.001	0.003	36	100.0	0.014	0.003	36	100.0	-4.332	10.425	36	100.0	-----	-----	0	0.0	0		
20090316/064118	20090316/065412	0.001	0.006	67	100.0	0.010	0.003	67	100.0	1.735	16.194	67	98.5	-----	-----	0	0.0	0		
20090316/081718	20090316/082848	-0.002	0.003	37	100.0	0.007	0.003	37	100.0	1.163	14.953	37	100.0	-----	-----	0	0.0	0		

STATION = WLPQ SATELLITE = ISS

	RESIDUALS					VDNA NOISE					RATING					
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	-0.001	0.004	0.005	0.005	248	5	0.0021	0.0031	0.0026	5	5	100.0				
ANGLE 2 (DEG)	0.009	0.009	0.004	0.011	251	5	0.0013	0.0031	0.0021	5	5	100.0				
RANGE (M)	-0.192	10.710	13.950	14.944	251	5	10.6116	13.9374	12.0236	5	5	99.2				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0				

STATION = WLPQ SATELLITE = ISS SUMMARY

	ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090316/011818	20090316/012724	-0.002	0.002	24	100.0	0.010	0.004	24	100.0	-10.883	10.150	24	100.0	-----	-----	0	0.0	0		
20090316/055836	20090316/060900	-0.001	0.004	39	100.0	0.010	0.003	39	100.0	-0.382	5.159	39	100.0	-----	-----	0	0.0	0		
20090316/073118	20090316/074218	-0.000	0.003	48	100.0	0.004	0.003	48	100.0	-0.023	8.919	48	100.0	-----	-----	0	0.0	0		
20090317/054942	20090317/060012	-0.001	0.004	46	100.0	0.011	0.003	46	100.0	-1.623	6.849	46	100.0	-----	-----	0	0.0	0		
20090317/072300	20090317/073300	-0.002	0.004	41	100.0	0.003	0.002	41	100.0	-3.232	7.367	41	100.0	-----	-----	0	0.0	0		

20090318/222700	20090318/224036	-0.000	0.003	66	100.0	0.005	0.004	66	100.0	7.969	25.323	66	89.4	-----	-----	0	0.0	0
20090319/000336	20090319/001524	-0.003	0.003	58	100.0	0.005	0.002	58	100.0	-13.768	16.231	58	98.3	-----	-----	0	0.0	0
20090319/031654	20090319/032730	-0.004	0.002	4	100.0	0.009	0.003	4	100.0	10.162	21.703	4	100.0	-----	-----	0	0.0	0
20090319/045218	20090319/050442	-0.003	0.004	60	100.0	0.006	0.003	60	100.0	3.335	11.611	60	100.0	-----	-----	0	0.0	0
20090319/062748	20090319/064012	-0.001	0.002	62	100.0	0.004	0.003	62	100.0	2.907	14.456	62	100.0	-----	-----	0	0.0	0

STATION = WLPQ SATELLITE = STS-119

	RESIDUALS						VDNA NOISE						RATING			
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	-0.001	0.003	0.003	0.004	448	10	0.0008	0.0037	0.0017	10	10	100.0				
ANGLE 2 (DEG)	0.006	0.006	0.003	0.007	448	10	0.0008	0.0043	0.0014	10	10	100.0				
RANGE (M)	-0.750	15.906	14.352	16.425	448	10	2.0693	29.2244	7.6941	10	10	98.2				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	10	0.0				

STATION = WLPQ SATELLITE = STS-119 SUMMARY

COMBINED STATISTICS FOR EACH STATION

STATION = AGO3
SATELLITE = STS-119

	RESIDUALS						VDNA NOISE						RATING			
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	0.029	0.048	0.024	0.045	184	7	0.0029	0.0111	0.0081	7	7	97.3				
ANGLE 2 (DEG)	-0.015	0.013	0.011	0.020	207	7	0.0026	0.0087	0.0060	7	7	100.0				
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0				

COMBINED STATISTICS SUMMARY FOR AGO3

STATION = ANTQ
SATELLITE = ISS
SATELLITE = STS-119

	RESIDUALS						VDNA NOISE						RATING			
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)	0.003	0.006	0.003	0.005	192	4	0.0008	0.0014	0.0012	4	4	100.0				
ANGLE 2 (DEG)	-0.005	0.009	0.006	0.009	192	4	0.0013	0.0057	0.0040	4	4	100.0				
RANGE (M)	-1.211	8.575	13.259	13.988	192	4	2.5367	8.6083	5.7689	4	4	100.0				
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0				

COMBINED STATISTICS SUMMARY FOR ANTO

STATION = ASCQ
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	0.003	0.004	0.005	366	7	0.0004	0.0037	0.0025	7	7	100.0	
ANGLE 2 (DEG)	0.007	0.014	0.006	0.011	370	7	0.0004	0.0043	0.0028	7	7	100.0	
RANGE (M)	4.702	10.235	14.341	15.936	370	7	5.1062	17.6598	12.9102	7	7	99.5	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	

COMBINED STATISTICS SUMMARY FOR ASCQ

STATION = EAFF
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	0.011	0.009	0.011	435	9	0.0048	0.0113	0.0067	9	9	100.0	
ANGLE 2 (DEG)	-0.003	0.004	0.008	0.009	441	9	0.0029	0.0064	0.0054	9	9	100.0	
RANGE (M)	4.574	12.756	19.944	21.433	440	9	4.8630	19.2360	15.2444	9	9	96.4	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	9	0.0	

COMBINED STATISTICS SUMMARY FOR EAFF

STATION = FRCF
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.003	0.007	0.008	0.009	929	19	0.0020	0.0115	0.0054	19	19	100.0	
ANGLE 2 (DEG)	-0.000	0.013	0.012	0.014	936	19	0.0034	0.0142	0.0082	19	19	99.9	
RANGE (M)	3.444	9.751	18.664	19.595	935	19	3.5909	23.6165	13.6787	19	19	98.3	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	19	0.0	

COMBINED STATISTICS SUMMARY FOR FRCF

STATION = KMRF
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	-----	0.015	-----	52	1	0.0118	0.0118	0.0118	1	1	100.0	
ANGLE 2 (DEG)	-0.022	-----	0.039	-----	52	1	0.0195	0.0195	0.0195	1	1	96.2	
RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	

COMBINED STATISTICS SUMMARY FOR KMRF

STATION = MIL3
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.003	0.037	0.019	0.027	94	6	0.0058	0.0152	0.0114	6	6	94.7	
ANGLE 2 (DEG)	-0.020	0.043	0.014	0.033	112	6	0.0023	0.0085	0.0061	6	6	92.0	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	

COMBINED STATISTICS SUMMARY FOR MIL3

STATION = MILA
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	0.051	0.016	0.030	161	7	0.0064	0.0185	0.0088	7	8	95.7	
ANGLE 2 (DEG)	-0.006	0.015	0.008	0.013	170	7	0.0022	0.0102	0.0057	7	8	100.0	
RANGE (M)	1.775	-----	3.819	-----	31	1	1.3892	1.3892	1.3892	1	8	100.0	
RANGE-RATE (M/S)	0.006	-----	0.016	-----	35	1	0.0012	0.0012	0.0012	1	8	100.0	

COMBINED STATISTICS SUMMARY FOR MILA

STATION = WL2F
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
ANGLE 2 (DEG)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
RANGE (M)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
RANGE-RATE (M/S)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	0.006	0.013	0.014	986	20	0.0026	0.0226	0.0108	20	20	100.0	
ANGLE 2 (DEG)	0.000	0.015	0.014	0.016	986	20	0.0033	0.0221	0.0108	20	20	100.0	
RANGE (M)	2.919	11.136	13.334	14.741	986	20	2.9716	16.5704	9.9931	20	20	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	20	0.0	

COMBINED STATISTICS SUMMARY FOR WL2F

STATION = WLPQ
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	0.003	0.004	0.004	696	15	0.0008	0.0037	0.0021	15	15	100.0	
ANGLE 2 (DEG)	0.007	0.007	0.003	0.008	699	15	0.0008	0.0043	0.0017	15	15	100.0	
RANGE (M)	-0.550	12.729	14.209	15.579	699	15	2.0693	29.2244	9.6350	15	15	98.6	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	15	0.0	

COMBINED STATISTICS SUMMARY FOR WLPQ

11. SN EVENT SUMMARY REPORT

The SN Event Summary Report provides a detailed summary of the tracking data quality of each SN tracking data event for STS. This report gives a chronological listing of all STS SN events summarized by Tracking Data Relay Satellite (TDRS) used for each event. The start and stop time, as well as other information pertaining to data quality such as the number of invalid, anomalous, and usable frames of tracking data, are listed for each event. Each event is rated as either a success or a failure. Comments are included for significant anomalous tracking data or for events having more than 30% invalid tracking data. This report also includes a statistical summary regarding the overall tracking data quality for all events for each TDRS used for STS support. This report is generated after the launch of STS.

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TEAS  
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TEAS TRACKING EVALUATION AUTOMATION SOFTWARE (TEAS)  
TEAS ALLIED SIGNAL TECHNICAL SERVICES CORPORATION  
TEAS TRACKING SUPPORT SERVICES (TSS)  
TEAS GODDARD SPACE FLIGHT CENTER  
TEAS BUILDING 28, ROOM N230  
TEAS GARY W. WILLIAMSON  
TEAS (301) 286-1323 PHONE  
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1 #####  
# Daily Statistics Start: 20090318/231018 GMT #  
# Daily Statistics End: 20090319/234010 GMT #  
# Mission Statistics Start: 20090314/000000 GMT #  
# Mission Statistics End: 20090319/234010 GMT #  
# Report Generated on: 20090320/000318 GMT #  
# Report Generated by: Gary Williamson (301) 286-1323 #  
#####  
1 STS-119 TDRS- 3 EVENT TRACKING SUMMARY LOG  
REPORT GENERATION TIME: 20090320/000318 GMT
```

EVT NUM	ORBIT NUMBER	S												COMMENTS				
		D	E	G	D	O	P	P	L	E	R	GSTDN	MODE		NOISE			
AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	USE		
MMDD/HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	HZ	%	F	
2 1	0316/000345	003625	10	SSA1	A	3	197	90	2	105	192	65	0	0	0	11	53	F 46% invalid Doppler, no lock = 33%
5 2	0316/015606	020746	10	SSA1	A	3	71	6	0	65	71	1	0	0	0	9	92	
8 3	0316/031024	033934	10	SSA1	A	3	170	4	0	166	170	1	0	0	0	9	98	
24 11	0316/143922	144902	10	SSA2	A	3	59	6	0	53	58	2	0	0	0	7	90	

27	11,12	0316/155354	163034	10	SSA1	A	3	221	2	0	219	221	0	0	0	0	11	99	
34	15	0316/204852	210802	10	SSA1	A	3	116	45	18	53	113	20	0	0	0	6	46	F 39% invalid Doppler, no lock = 17%
38	16	0316/222239	224639	10	SSA1	A	3	145	13	18	114	143	6	0	0	0	8	79	
59	25,26	0317/123547	131507	10	SSA1	A	3	237	17	0	220	235	4	0	0	0	8	93	
62	27	0317/143808	144118	10	SSA1	A	3	20	3	0	17	19	1	0	0	0	7	85	
65	27,28	0317/154658	161518	10	SSA1	A	3	171	0	0	171	171	0	0	0	0	8	100	
68	29	0317/174429	175039	10	SSA1	A	3	38	2	0	36	38	1	0	0	0	5	95	
71	30	0317/192057	192757	10	SSA1	A	3	43	2	0	41	43	0	0	0	0	7	95	
75	31	0317/205714	210724	10	SSA1	A	3	62	4	2	56	61	1	0	0	0	7	90	
78	32	0317/222611	225951	10	SSA1	A	3	204	5	2	197	204	0	0	0	0	5	97	
81	33	0318/001431	002621	10	SSA1	A	3	72	2	0	70	72	0	0	0	0	5	97	
99	40,41	0318/113930	120300	10	SSA1	A	3	142	2	0	140	142	0	0	0	0	7	99	
104	43	0318/145825	150515	10	SSA1	A	3	42	0	0	42	42	0	0	0	0	8	100	
107	44	0318/163534	163904	10	SSA1	A	3	22	0	0	22	22	0	0	0	0	7	100	
110	45	0318/181523	181803	10	SSA1	A	3	17	0	0	17	17	17	0	0	0	0	100	
113	46	0318/194811	201651	10	SSA1	A	3	173	2	0	171	172	1	0	0	0	8	99	
116	47	0318/212520	215300	10	SSA1	A	3	168	6	3	159	168	1	0	0	0	7	95	
119	48	0318/230029	232629	10	SSA1	A	3	157	2	0	155	157	0	0	0	0	6	99	
122	49	0319/004951	010201	10	SSA1	A	3	74	2	0	72	74	1	0	0	0	8	97	
125	50	0319/022246	024346	10	SSA1	A	3	127	8	3	116	127	0	0	0	0	8	91	
129	51	0319/035950	042440	10	SSA1	A	3	151	0	0	151	151	0	0	0	0	7	100	
132	52,53	0319/053528	060248	10	SSA1	A	3	165	7	0	158	165	0	0	0	0	4	96	
135	53,54	0319/071054	074104	10	SSA1	A	3	182	0	0	182	182	0	0	0	0	6	100	
138	54,55	0319/085058	091738	10	SSA1	A	3	161	2	0	159	160	1	0	0	0	8	99	
141	55,56	0319/102923	103903	10	SSA1	A	3	59	11	4	44	58	3	0	0	0	7	75	
144	57	0319/120657	121937	10	SSA1	A	3	77	6	0	71	76	1	0	0	0	9	92	
151	60	0319/170309	170859	10	SSA1	A	3	36	6	0	30	35	2	0	0	0	4	83	
154	61	0319/183921	184651	10	SSA1	A	3	46	2	0	44	46	1	0	0	0	8	96	
157	62	0319/201602	204452	10	SSA1	A	3	174	3	0	171	173	1	0	0	0	4	98	
160	63	0319/215411	222051	10	SSA1	A	3	162	11	3	148	160	3	0	0	0	4	91	
163	64	0319/233347	234007	10	SSA1	A	3	39	1	0	38	39	0	0	0	0	6	97	

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STS-119 TDRS- 4 EVENT TRACKING SUMMARY LOG

REPORT GENERATION TIME: 20090320/000318 GMT

EVT NUM	ORBIT NUMBER	S												COMMENTS				
		D	E	G	D	O	P	P	L	E	R	GSTDN	MODE	NOISE				
MMDD	HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	NL	TOT	DCE	NL	MIL	USE	
1	1	0315/234355	001855	10	SSA2	B	1	211	52	0	159	202	36	0	0	0	25	75
4	2	0316/012447	015507	10	SSA2	B	1	183	2	1	180	182	1	0	0	0	4	98
7	3	0316/023957	030947	10	SSA2	B	1	180	3	0	177	180	1	0	0	0	8	98
10	4	0316/043202	050632	10	SSA2	B	1	208	5	1	202	206	2	0	0	0	3	97
14	6	0316/074135	081435	10	SSA2	B	1	199	25	17	157	197	9	0	0	0	4	79
16	7	0316/091837	094857	10	SSA2	B	1	183	18	11	154	181	5	0	0	0	3	84
18	8	0316/105602	112412	10	SSA2	B	1	170	6	2	162	169	1	0	0	0	3	95
20	9	0316/123201	130121	10	SSA2	B	1	177	9	5	163	177	0	0	0	0	3	92
23	10,11	0316/140556	143846	10	SSA2	B	1	198	5	0	193	197	1	0	0	0	5	97

26	11	0316/154025	155315	10	SSA2	B	1	78	7	0	71	78	2	0	0	0	0	0	91	
29	12,13	0316/171401	174931	10	SSA2	B	1	214	10	8	196	213	4	0	0	0	0	5	92	
31	13,14	0316/183308	192318	10	SSA2	B	1	302	3	0	299	302	0	0	0	0	0	3	99	
33	14,15	0316/202003	204813	10	SSA2	B	1	170	3	0	167	169	1	0	0	0	0	3	98	
37	16	0316/220216	222206	10	SSA2	B	1	120	0	0	120	120	0	0	0	0	0	4	100	
41	17	0316/233940	000830	10	SSA2	B	1	174	6	0	168	173	3	0	0	0	0	5	97	
43	17,18	0317/005240	014600	10	SSA2	B	1	321	5	1	315	321	1	0	0	0	0	4	98	
45	19	0317/023019	032249	10	SSA2	B	1	316	7	5	304	316	0	0	0	0	0	4	96	
47	20	0317/040700	045810	10	SSA2	B	1	308	12	3	293	308	3	0	0	0	0	4	95	
49	21	0317/055800	063220	10	SSA2	B	1	207	4	0	203	206	2	0	0	0	0	2	98	
51	22	0317/071621	080621	10	SSA2	B	1	301	64	56	181	297	25	0	0	0	0	3	60	
54	23	F	21% invalid Doppler, no lock = 8%	0317/091001	094101	10	SSA2	B	1	187	25	10	152	186	3	0	0	0	3	81
56	24	0317/104834	111004	10	SSA2	B	1	130	10	0	120	130	1	0	0	0	0	5	92	
58	25	0317/122428	123508	10	SSA2	B	1	65	2	0	63	65	0	0	0	0	0	7	97	
61	26	0317/135840	141000	10	SSA2	B	1	69	15	5	49	68	1	0	0	0	0	5	71	
64	27	0317/151549	154619	10	SSA2	B	1	184	4	0	180	184	1	0	0	0	0	4	98	
67	28,29	0317/170847	174357	10	SSA2	B	1	212	8	24	180	212	0	0	0	0	0	5	85	
70	29,30	0317/184630	192010	10	SSA2	B	1	203	47	22	134	201	22	0	0	0	0	4	66	
74	30,31	F	23% invalid Doppler, no lock = 11%	0317/200329	205639	10	SSA2	B	1	320	12	3	305	319	1	0	0	0	9	95
77	32	0317/220550	222540	10	SSA2	B	1	120	2	0	118	120	1	0	0	0	0	3	98	
80	33	0317/234436	001356	10	SSA2	B	1	177	27	3	147	175	4	0	0	0	0	3	83	
83	34	0318/011909	015359	10	SSA2	B	1	210	38	2	170	207	12	0	0	0	0	4	81	
85	35	0318/025719	033159	10	SSA2	B	1	209	0	0	209	209	0	0	0	0	0	3	100	
87	36	0318/041556	050936	10	SSA2	B	1	323	36	4	283	320	16	0	0	0	0	3	88	
89	37	0318/055257	064547	10	SSA2	B	1	318	25	18	275	316	8	0	0	0	0	3	86	
91	38	0318/072914	082214	10	SSA2	B	1	319	16	23	280	318	3	0	0	0	0	3	88	
95	39	0318/091113	095943	10	SSA2	B	1	292	4	0	288	292	0	0	0	0	0	3	99	
98	40	0318/110935	113855	10	SSA2	B	1	177	0	0	177	177	0	0	0	0	0	2	100	
101	41,42	0318/123911	131901	10	SSA2	B	1	240	2	4	234	240	0	0	0	0	0	2	98	
103	42,43	0318/142300	145750	10	SSA2	B	1	210	1	0	209	210	0	0	0	0	0	3	100	
106	43,44	0318/155111	163501	10	SSA2	B	1	264	0	0	264	264	0	0	0	0	0	2	100	
109	44,45	0318/172741	181121	10	SSA2	B	1	263	0	0	263	263	0	0	0	0	0	3	100	
112	45,46	0318/190141	194731	10	SSA2	B	1	276	11	11	254	274	2	0	0	0	0	3	92	
115	46,47	0318/204431	212441	10	SSA2	B	1	242	7	0	235	241	1	0	0	0	0	3	97	
118	48	0318/223446	225956	10	SSA2	B	1	152	3	0	149	150	2	0	0	0	0	3	98	
121	49	0319/001016	004336	10	SSA2	B	1	201	4	0	197	200	1	0	0	0	0	3	98	
124	50	0319/014836	022206	10	SSA2	B	1	202	0	0	202	202	0	0	0	0	0	2	100	
127	51	0319/033541	034151	10	SSA1	A	1	38	1	0	37	37	1	0	0	0	0	2	97	
128	51	0319/034731	035911	10	SSA2	B	1	71	0	0	71	71	0	0	0	0	0	2	100	
131	52	0319/050142	053452	10	SSA2	B	1	200	4	8	188	200	1	0	0	0	0	3	94	
134	53	0319/064008	071018	10	SSA2	B	1	182	4	1	177	182	2	0	0	0	0	3	97	
137	54	0319/081311	085021	10	SSA2	B	1	224	0	0	224	224	0	0	0	0	0	3	100	
140	55	0319/095958	102848	10	SSA2	B	1	174	3	1	170	174	0	0	0	0	0	2	98	
143	56,57	0319/113746	120626	10	SSA2	B	1	173	5	0	168	172	2	0	0	0	0	2	97	
146	57,58	0319/131417	134807	10	SSA2	B	1	204	1	0	203	204	0	0	0	0	0	4	100	
148	58,59	0319/145029	152559	10	SSA2	B	1	214	5	0	209	214	2	0	0	0	0	3	98	
150	59,60	0319/162710	170230	10	SSA2	B	1	213	0	0	213	213	0	0	0	0	0	4	100	
153	60,61	0319/180514	183844	10	SSA2	B	1	202	7	16	179	202	0	0	0	0	0	3	89	

156	61,62	0319/193831	201531	10	SSA2	B	1	223	7	3	213	223	0	0	0	0	4	96
159	63	0319/212500	215340	10	SSA2	B	1	173	5	3	165	173	0	0	0	0	4	95
162	64	0319/230309	233309	10	SSA2	B	1	181	2	0	179	181	0	0	0	0	4	99

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STS-119 TDRS- 5 EVENT TRACKING SUMMARY LOG
REPORT GENERATION TIME: 20090320/000318 GMT

EVT NUM	ORBIT NUMBER	S																		COMMENTS	
		TDRS- 5	AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	USE		
MMDD/HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	Hz	%	F
3	1,2	0316/003430	012410	10	SSA2	B	2	299	6	0	293	299	0	0	0	0	0	0	6	98	
6	2,3	0316/020828	023918	10	SSA2	B	2	186	27	19	140	183	7	0	0	0	0	0	7	75	
9	3,4	0316/034105	043015	10	SSA2	B	2	296	41	28	227	292	28	0	0	0	0	0	4	77	
11	4,5	0316/051450	060540	10	SSA2	B	2	306	18	8	280	305	5	0	0	0	0	0	3	92	
13	5,6	0316/064906	073616	10	SSA2	B	2	284	3	3	278	283	1	0	0	0	0	0	3	98	
15	6,7	0316/082442	091612	10	SSA2	B	2	310	2	0	308	310	0	0	0	0	0	0	5	99	
17	7,8	0316/100159	105529	10	SSA2	B	2	322	0	3	319	322	0	0	0	0	0	0	4	99	
19	9	0316/113921	123121	10	SSA2	B	2	313	4	2	307	313	1	0	0	0	0	0	4	98	
21	10	0316/131513	133823	10	SSA2	B	2	140	3	1	136	139	1	0	0	0	0	0	4	97	
25	11	0316/144936	153946	10	SSA2	B	2	302	31	12	259	298	15	0	0	0	0	0	0	86	
28	12	0316/163109	171329	10	SSA2	B	2	255	7	16	232	254	1	0	0	0	0	0	5	91	
30	13	0316/175731	183231	10	SSA2	B	2	211	12	24	175	208	4	0	0	0	0	0	5	83	
32	14	0316/193240	201930	10	SSA2	B	2	282	2	0	280	282	0	0	0	0	0	0	2	99	
35	15	0316/210930	213710	10	SSA2	B	2	167	3	2	162	167	0	0	0	0	0	0	3	97	
39	16	0316/224710	231450	10	SSA2	B	2	167	2	0	165	166	1	0	0	0	0	0	2	99	
42	17	0317/002333	005203	10	SSA2	B	2	172	3	2	167	172	0	0	0	0	0	0	2	97	
44	18,19	0317/015823	022943	10	SSA2	B	2	189	38	15	136	185	12	0	0	0	0	0	7	72	
46	19,20	0317/033221	040621	10	SSA2	B	2	205	27	5	173	203	14	0	0	0	0	0	4	84	
48	20,21	0317/050616	055726	10	SSA2	B	2	308	10	0	298	307	4	0	0	0	0	0	4	97	
50	21,22	0317/064051	071541	10	SSA2	B	2	210	2	0	208	210	0	0	0	0	0	0	4	99	
52	22,23	0317/082119	085329	10	SSA2	B	2	194	2	0	192	194	1	0	0	0	0	0	4	99	
55	24	0317/095639	104759	10	SSA2	B	2	309	5	1	303	309	0	0	0	0	0	0	3	98	
57	25	0317/113431	122341	10	SSA2	B	2	296	0	0	296	295	1	0	0	0	0	0	4	100	
60	26	0317/131539	135809	10	SSA2	B	2	256	7	1	248	254	3	0	0	0	0	0	4	97	
63	27	0317/144154	151514	10	SSA2	B	2	201	4	0	197	201	0	0	0	0	0	0	5	98	
66	28	0317/161551	170801	10	SSA2	B	2	314	22	4	288	311	5	0	0	0	0	0	7	92	
69	29	0317/175110	184540	10	SSA2	B	2	328	8	1	319	328	3	0	0	0	0	0	5	97	
72	30	0317/192829	200029	10	SSA2	B	2	193	3	0	190	193	0	0	0	0	0	0	3	98	
73	30	0317/200106	200256	10	SSA1	A	2	12	2	0	10	12	0	0	0	0	0	0	4	83	
76	31,32	0317/210820	220510	10	SSA2	B	2	342	105	17	220	335	41	0	0	0	0	8	64	F 31% invalid Doppler, no lock = 12%	
79	32,33	0317/230031	234341	10	SSA2	B	2	260	8	0	252	258	3	0	0	0	0	3	97		
82	33,34	0318/003555	011835	10	SSA2	B	2	257	3	0	254	257	0	0	0	0	0	3	99		
84	34,35	0318/020330	025640	10	SSA2	B	2	320	21	12	287	318	13	0	0	0	0	2	90		
86	35,36	0318/033944	041524	10	SSA2	B	2	215	30	9	176	214	14	0	0	0	0	3	82		
88	36,37	0318/051606	055226	10	SSA2	B	2	219	26	8	185	217	16	0	0	0	0	3	84		
90	37,38	0318/065331	072841	10	SSA2	B	2	212	49	16	147	209	35	0	0	0	0	3	69	F 23% invalid Doppler, no lock = 17%	
92	38,39	0318/083248	084828	10	SSA1	A	2	95	83	9	3	89	59	0	0	0	0	3	F 87% invalid Doppler, no lock = 62%		

93 39	0318/084902	090452	10	SSA2	B	2	96	17	5	74	96	6	0	0	0	3	77	
96 40	0318/101303	102613	10	SSA1	A	2	80	41	17	22	76	21	0	0	0	10	28 F	51% invalid Doppler, no lock = 26%
97 40	0318/102650	110900	10	SSA2	B	2	254	3	0	251	253	1	0	0	0	3	99	
100 41	0318/120331	123831	10	SSA2	B	2	211	2	0	209	211	0	0	0	0	3	99	
102 42	0318/132910	142220	10	SSA2	B	2	320	20	11	289	315	9	0	0	0	3	90	
105 43	0318/150548	155038	10	SSA2	B	2	270	19	10	241	268	11	0	0	0	3	89	
108 44	0318/164144	172704	10	SSA2	B	2	273	16	19	238	273	5	0	0	0	2	87	
111 45	0318/181850	190110	10	SSA2	B	2	255	41	5	209	253	21	0	0	0	2	82	
114 46	0318/201731	204351	10	SSA2	B	2	159	1	0	158	159	0	0	0	0	3	99	
117 47,48	0318/215331	223411	10	SSA2	B	2	245	10	2	233	244	3	0	0	0	3	95	
120 48,49	0318/232707	000937	10	SSA2	B	2	256	6	0	250	256	1	0	0	0	3	98	
123 49,50	0319/010237	014757	10	SSA2	B	2	273	3	0	270	272	1	0	0	0	3	99	
126 50,51	0319/024417	032417	10	SSA2	B	2	241	10	5	226	240	2	0	0	0	3	94	
130 51,52	0319/042511	050111	10	SSA2	B	2	217	7	0	210	215	3	0	0	0	3	97	
133 53	0319/060321	063931	10	SSA2	B	2	218	49	2	167	213	25	45	40	24	3	97	
136 54	0319/074135	081235	10	SSA2	B	2	187	60	0	127	175	26	0	0	0	2	68 F	32% invalid Doppler, no lock = 14%
139 55	0319/091817	095927	10	SSA2	B	2	248	61	4	183	232	45	0	0	0	3	74	
142 56	0319/104226	113706	10	SSA2	B	2	329	28	6	295	328	22	0	0	0	3	90	
145 57	0319/122010	131340	10	SSA2	B	2	322	20	6	296	322	9	0	0	0	3	92	
147 58	0319/135645	144955	10	SSA2	B	2	320	26	9	285	318	7	0	0	0	3	89	
149 59	0319/153255	162635	10	SSA2	B	2	323	15	16	292	322	7	0	0	0	3	90	
152 60	0319/170931	180441	10	SSA2	B	2	332	26	9	297	330	13	0	0	0	3	89	
155 61	0319/184729	193759	10	SSA2	B	2	304	48	13	243	303	21	0	0	0	3	80	
158 62,63	0319/204531	212421	10	SSA2	B	2	234	0	0	234	234	0	0	0	0	5	100	
161 63,64	0319/222131	225951	10	SSA2	B	2	231	3	0	228	231	2	0	0	0	3	99	

1 STS-119 TDRS- 6 EVENT TRACKING SUMMARY LOG
REPORT GENERATION TIME: 20090320/000318 GMT

S																				
EVT	ORBIT	TDRS- 6	AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	NOISE	
NUM	NUMBER	MMDD/HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	HZ	%	F
22	10	0316/134331	140511	10	SSA1	A	1	131	1	2	128	131	0	0	0	0	3	98		
36	15,16	0316/213749	220139	10	SSA1	A	1	144	3	0	141	144	0	0	0	0	3	98		
40	16,17	0316/231523	233903	10	SSA1	A	1	143	7	1	135	141	4	0	0	0	3	94		
53	23	0317/085401	090921	10	SSA1	A	1	93	0	1	92	93	0	0	0	0	11	99		

1 STS-119 TDRS-10 EVENT TRACKING SUMMARY LOG
REPORT GENERATION TIME: 20090320/000318 GMT

S																			
EVT	ORBIT	TDRS-10	AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	NOISE
NUM	NUMBER	MMDD/HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	HZ	%	F
12	5	0316/060612	063922	10	SSA1	A	2	200	2	0	198	200	0	0	0	0	3	99	
94	39	0318/090528	091038	10	SSA1	B	2	32	25	7	0	31	11	0	0	0	0	0	F 78% invalid Doppler, no lock = 34%

1

STS-119 TDRS- 3 TRACKING DATA DAILY REPORT FOR DAY 4

REPORT GENERATION TIME: 20090320/000318 GMT

DAILY EVENTS: 122 TO 163 FROM 20090319/004951 TO 20090319/234007 GMT

MISSION EVENTS: 2 TO 163 FROM 20090316/000345 TO 20090319/234007 GMT

	DAILY	MISSION
# OF EVENTS	13	35
# OF SUCCESSES	13	33
% SUCCESSES	100.0	94.3
# OF USABLE MINUTES	230.7	612.2
# OF ANOMALOUS MINUTES	1.7	9.2
# OF INVALID MINUTES	9.8	45.3
# OF TOTAL MINUTES	242.2	666.7
AV. USABLE MINUTES	17.7	17.5
AV. ANOMALOUS MINUTES	0.1	0.3
AV. INVALID MINUTES	0.8	1.3
AV. MINUTES PER EVENT	18.6	19.0
% USABLE	95.3	91.8
% ANOMALOUS	0.7	1.4
% INVALID	4.1	6.8

NO EVENTS WERE RATED AS FAILURES FOR TDRS- 3.

1

STS-119 TDRS- 4 TRACKING DATA DAILY REPORT FOR DAY 4

REPORT GENERATION TIME: 20090320/000318 GMT

DAILY EVENTS: 121 TO 162 FROM 20090319/001016 TO 20090319/233309 GMT

MISSION EVENTS: 1 TO 162 FROM 20090315/234355 TO 20090319/233309 GMT

	DAILY	MISSION
# OF EVENTS	16	60
# OF SUCCESSES	16	58
% SUCCESSES	100.0	96.7
# OF USABLE MINUTES	465.8	1899.5
# OF ANOMALOUS MINUTES	5.3	45.2
# OF INVALID MINUTES	8.0	98.2
# OF TOTAL MINUTES	479.2	2042.8
AV. USABLE MINUTES	29.1	31.7
AV. ANOMALOUS MINUTES	0.3	0.8
AV. INVALID MINUTES	0.5	1.6
AV. MINUTES PER EVENT	29.9	34.0
% USABLE	97.2	93.0
% ANOMALOUS	1.1	2.2
% INVALID	1.7	4.8

NO EVENTS WERE RATED AS FAILURES FOR TDRS- 4.

1

STS-119 TDRS- 5 TRACKING DATA DAILY REPORT FOR DAY 4
REPORT GENERATION TIME: 20090320/000318 GMT
DAILY EVENTS: 120 TO 161 FROM 20090318/232707 TO 20090319/225951 GMT
MISSION EVENTS: 3 TO 161 FROM 20090316/003430 TO 20090319/225951 GMT

	DAILY	MISSION
# OF EVENTS	15	62
# OF SUCCESSES	14	57
% SUCCESSES	93.3	91.9
# OF USABLE MINUTES	600.5	2272.8
# OF ANOMALOUS MINUTES	11.7	59.5
# OF INVALID MINUTES	52.8	184.3
# OF TOTAL MINUTES	665.0	2516.7
AV. USABLE MINUTES	40.0	36.7
AV. ANOMALOUS MINUTES	0.8	1.0
AV. INVALID MINUTES	3.5	3.0
AV. MINUTES PER EVENT	44.3	40.6
% USABLE	90.3	90.3
% ANOMALOUS	1.8	2.4
% INVALID	7.9	7.3

THE FOLLOWING DAILY EVENTS WERE RATED AS FAILURES FOR TDRS- 5:

EVT YYYYMMDD/HHMMSS SERV	COMMENT
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136 20090319/074135 SSA2 32% invalid Doppler, no lock = 14%

1

STS-119 TDRS- 6 TRACKING DATA DAILY REPORT FOR DAY 4
REPORT GENERATION TIME: 20090320/000318 GMT
DAILY EVENTS: 0 TO 0 FROM 0/000000 TO 0/000000 GMT
MISSION EVENTS: 22 TO 53 FROM 20090316/134331 TO 20090317/090921 GMT

	DAILY	MISSION
# OF EVENTS	0	4
# OF SUCCESSES	0	4
% SUCCESSES	0.0	100.0
# OF USABLE MINUTES	0.0	82.7
# OF ANOMALOUS MINUTES	0.0	0.7
# OF INVALID MINUTES	0.0	1.8
# OF TOTAL MINUTES	0.0	85.2
AV. USABLE MINUTES	0.0	20.7
AV. ANOMALOUS MINUTES	0.0	0.2
AV. INVALID MINUTES	0.0	0.5
AV. MINUTES PER EVENT	0.0	21.3
% USABLE	0.0	97.1
% ANOMALOUS	0.0	0.8

% INVALID 0.0 2.2

NO EVENTS WERE RATED AS FAILURES FOR TDRS- 6.

1

STS-119 TDRS-10 TRACKING DATA DAILY REPORT FOR DAY 4
REPORT GENERATION TIME: 20090320/000318 GMT
DAILY EVENTS: 0 TO 0 FROM 0/000000 TO 0/000000 GMT
MISSION EVENTS: 12 TO 94 FROM 20090316/060612 TO 20090318/091038 GMT

	DAILY	MISSION
# OF EVENTS	0	2
# OF SUCCESSES	0	1
% SUCCESSES	0.0	50.0
# OF USABLE MINUTES	0.0	33.0
# OF ANOMALOUS MINUTES	0.0	1.2
# OF INVALID MINUTES	0.0	4.5
# OF TOTAL MINUTES	0.0	38.7
AV. USABLE MINUTES	0.0	16.5
AV. ANOMALOUS MINUTES	0.0	0.6
AV. INVALID MINUTES	0.0	2.3
AV. MINUTES PER EVENT	0.0	19.3
% USABLE	0.0	85.3
% ANOMALOUS	0.0	3.0
% INVALID	0.0	11.6

NO EVENTS WERE RATED AS FAILURES FOR TDRS-10.

1	59811	STS119dc000	20090315/232805	4	0315/234355	001855
2	59845	STS119dc001	20090315/234112	3	0316/000345	003625
3	59814	STS119dc001	20090315/234112	5	0316/003430	012410
4	59815	STS119dc001	20090315/234112	4	0316/012447	015507
5	59826	STS119dc002	20090316/104110	3	0316/015606	020746
6	59822	STS119dc002	20090316/104110	5	0316/020828	023918
7	59823	STS119dc002	20090316/104110	4	0316/023957	030947
8	59846	STS119dc003	20090316/110408	3	0316/031024	033934
9	59829	STS119dc003	20090316/110408	5	0316/034105	043015
10	59830	STS119dc003	20090316/110408	4	0316/043202	050632
11	59831	STS119dc003	20090316/110408	5	0316/051450	060540
12	59832	STS119dc003	20090316/110408	10	0316/060612	063922
13	59833	STS119dc004	20090316/110442	5	0316/064906	073616
14	59834	STS119dc004	20090316/110442	4	0316/074135	081435
15	59835	STS119dc005	20090316/110514	5	0316/082442	091612
16	59836	STS119dc005	20090316/110514	4	0316/091837	094857
17	59837	STS119dc006	20090316/110546	5	0316/100159	105529
18	59838	STS119dc006	20090316/110546	4	0316/105602	112412

19	59839	STS119dc007	20090316/110623	5	0316/113921	123121
20	59840	STS119dc007	20090316/110623	4	0316/123201	130121
21	59841	STS119dc007	20090316/110623	5	0316/131513	133823
22	59842	STS119dc007	20090316/110623	6	0316/134331	140511
23	59843	STS119dc007	20090316/110623	4	0316/140556	143846
24	59945	STS119dc008	20090316/175751	3	0316/143922	144902
25	59942	STS119dc008	20090316/175751	5	0316/144936	153946
26	59943	STS119dc008	20090316/175751	4	0316/154025	155315
27	59947	STS119dc008	20090316/174042	3	0316/155354	163034
28	59939	STS119dc008	20090316/174042	5	0316/163109	171329
29	59940	STS119dc008	20090316/174042	4	0316/171401	174931
30	59925	STS119dc009	20090316/152857	5	0316/175731	183231
31	59926	STS119dc009	20090316/152857	4	0316/183308	192318
32	59927	STS119dc010	20090316/170433	5	0316/193240	201930
33	59928	STS119dc010	20090316/170433	4	0316/202003	204813
34	59953	STS119dc011	20090316/184058	3	0316/204852	210802
35	59949	STS119dc011	20090316/184058	5	0316/210930	213710
36	59950	STS119dc011	20090316/184058	6	0316/213749	220139
37	59951	STS119dc011	20090316/184058	4	0316/220216	222206
38	60264	STS119dc012	20090316/202138	3	0316/222239	224639
39	60132	STS119dc012	20090316/202138	5	0316/224710	231450
40	60133	STS119dc012	20090316/202138	6	0316/231523	233903
41	60134	STS119dc012	20090316/202138	4	0316/233940	000830
42	60265	STS119dc013	20090316/215506	5	0317/002333	005203
43	60266	STS119dc013	20090316/215506	4	0317/005240	014600
44	60267	STS119dc014	20090316/232943	5	0317/015823	022943
45	60268	STS119dc014	20090316/232943	4	0317/023019	032249
46	60269	STS119dc015	20090317/010454	5	0317/033221	040621
47	60270	STS119dc015	20090317/010454	4	0317/040700	045810
48	60271	STS119dc016	20090317/023709	5	0317/050616	055726
49	60272	STS119dc016	20090317/023709	4	0317/055800	063220
50	60273	STS119dc017	20090317/041232	5	0317/064051	071541
51	60274	STS119dc017	20090317/041232	4	0317/071621	080621
52	60275	STS119dc018	20090317/054934	5	0317/082119	085329
53	60276	STS119dc018	20090317/054934	6	0317/085401	090921
54	60277	STS119dc018	20090317/054934	4	0317/091001	094101
55	60280	STS119dc019	20090317/072511	5	0317/095639	104759
56	60281	STS119dc019	20090317/072511	4	0317/104834	111004
57	60284	STS119dc020	20090317/090249	5	0317/113431	122341
58	60285	STS119dc020	20090317/090249	4	0317/122428	123508
59	60363	STS119dc021	20090317/104230	3	0317/123547	131507
60	60288	STS119dc021	20090317/104230	5	0317/131539	135809
61	60289	STS119dc021	20090317/104230	4	0317/135840	141000
62	60291	STS119dc022	20090317/121424	3	0317/143808	144118
63	60292	STS119dc022	20090317/121424	5	0317/144154	151514
64	60293	STS119dc022	20090317/121424	4	0317/151549	154619
65	60370	STS119dc023	20090317/185801	3	0317/154658	161518
66	60374	STS119dc023	20090317/190706	5	0317/161551	170801

67	60372	STS119dc023	20090317/190706	4	0317/170847	174357
68	60377	STS119dc024	20090317/192427	3	0317/174429	175039
69	60381	STS119dc024	20090317/193052	5	0317/175110	184540
70	60379	STS119dc024	20090317/193052	4	0317/184630	192010
71	60387	STS119dc025	20090317/194303	3	0317/192057	192757
72	60383	STS119dc025	20090317/194303	5	0317/192829	200029
73	60384	STS119dc025	20090317/194303	5	0317/200106	200256
74	60385	STS119dc025	20090317/194303	4	0317/200329	205639
75	60388	STS119dc026	20090317/184420	3	0317/205714	210724
76	60365	STS119dc026	20090317/184420	5	0317/210820	220510
77	60366	STS119dc026	20090317/184420	4	0317/220550	222540
78	60706	STS119dc027	20090317/202436	3	0317/222611	225951
79	60555	STS119dc027	20090317/202436	5	0317/230031	234341
80	60556	STS119dc027	20090317/202436	4	0317/234436	001356
81	60710	STS119dc028	20090317/220132	3	0318/001431	002621
82	60708	STS119dc028	20090317/220132	5	0318/003555	011835
83	60709	STS119dc028	20090317/220132	4	0318/011909	015359
84	60711	STS119dc029	20090317/234143	5	0318/020330	025640
85	60712	STS119dc029	20090317/234143	4	0318/025719	033159
86	60713	STS119dc030	20090318/011729	5	0318/033944	041524
87	60714	STS119dc030	20090318/011729	4	0318/041556	050936
88	60715	STS119dc031	20090318/025336	5	0318/051606	055226
89	60716	STS119dc031	20090318/025336	4	0318/055257	064547
90	60717	STS119dc032	20090318/043002	5	0318/065331	072841
91	60718	STS119dc032	20090318/043002	4	0318/072914	082214
92	60719	STS119dc033	20090318/060638	5	0318/083248	084828
93	60720	STS119dc033	20090318/060638	5	0318/084902	090452
94	60721	STS119dc033	20090318/060638	10	0318/090528	091038
95	60722	STS119dc033	20090318/060638	4	0318/091113	095943
96	60723	STS119dc034	20090318/074715	5	0318/101303	102613
97	60724	STS119dc034	20090318/074715	5	0318/102650	110900
98	60725	STS119dc034	20090318/074715	4	0318/110935	113855
99	60743	STS119dc035	20090318/092652	3	0318/113930	120300
100	60728	STS119dc035	20090318/092652	5	0318/120331	123831
101	60729	STS119dc035	20090318/092652	4	0318/123911	131901
102	60730	STS119dc036	20090318/112141	5	0318/132910	142220
103	60731	STS119dc036	20090318/112141	4	0318/142300	145750
104	60744	STS119dc037	20090318/124218	3	0318/145825	150515
105	60734	STS119dc037	20090318/124218	5	0318/150548	155038
106	60735	STS119dc037	20090318/124218	4	0318/155111	163501
107	60736	STS119dc037	20090318/124218	3	0318/163534	163904
108	60741	STS119dc038	20090318/170938	5	0318/164144	172704
109	60742	STS119dc038	20090318/170938	4	0318/172741	181121
110	60737	STS119dc039	20090318/155315	3	0318/181523	181803
111	60738	STS119dc039	20090318/155315	5	0318/181850	190110
112	60739	STS119dc039	20090318/155315	4	0318/190141	194731
113	60749	STS119dc040	20090318/173213	3	0318/194811	201651
114	60746	STS119dc040	20090318/173213	5	0318/201731	204351

115	60747	STS119dc040	20090318/173213	4	0318/204431	212441
116	60754	STS119dc041	20090318/191056	3	0318/212520	215300
117	60751	STS119dc041	20090318/191056	5	0318/215331	223411
118	60752	STS119dc041	20090318/191056	4	0318/223446	225956
119	61101	STS119dc042	20090318/205101	3	0318/230029	232629
120	61010	STS119dc042	20090318/205101	5	0318/232707	000937
121	61011	STS119dc042	20090318/205101	4	0319/001016	004336
122	61106	STS119dc043	20090318/222929	3	0319/004951	010201
123	61103	STS119dc043	20090318/222929	5	0319/010237	014757
124	61104	STS119dc043	20090318/222929	4	0319/014836	022206
125	61158	STS119dc044	20090319/000613	3	0319/022246	024346
126	61108	STS119dc044	20090319/000613	5	0319/024417	032417
127	61109	STS119dc044	20090319/000613	4	0319/033541	034151
128	61110	STS119dc044	20090319/000613	4	0319/034731	035911
129	61159	STS119dc045	20090319/014218	3	0319/035950	042440
130	61113	STS119dc045	20090319/014218	5	0319/042511	050111
131	61114	STS119dc045	20090319/014218	4	0319/050142	053452
132	61160	STS119dc046	20090319/031820	3	0319/053528	060248
133	61117	STS119dc046	20090319/031820	5	0319/060321	063931
134	61118	STS119dc046	20090319/031820	4	0319/064008	071018
135	61161	STS119dc047	20090319/045627	3	0319/071054	074104
136	61121	STS119dc047	20090319/045627	5	0319/074135	081235
137	61122	STS119dc047	20090319/045627	4	0319/081311	085021
138	61162	STS119dc048	20090319/063636	3	0319/085058	091738
139	61125	STS119dc048	20090319/063636	5	0319/091817	095927
140	61126	STS119dc048	20090319/063636	4	0319/095958	102848
141	61163	STS119dc049	20090319/081647	3	0319/102923	103903
142	61129	STS119dc049	20090319/081647	5	0319/104226	113706
143	61130	STS119dc049	20090319/081647	4	0319/113746	120626
144	61164	STS119dc050	20090319/095504	3	0319/120657	121937
145	61133	STS119dc050	20090319/095504	5	0319/122010	131340
146	61134	STS119dc050	20090319/095504	4	0319/131417	134807
147	61149	STS119dc051	20090319/113158	5	0319/135645	144955
148	61150	STS119dc051	20090319/113158	4	0319/145029	152559
149	61151	STS119dc052	20090319/130939	5	0319/153255	162635
150	61152	STS119dc052	20090319/130939	4	0319/162710	170230
151	61165	STS119dc053	20090319/144606	3	0319/170309	170859
152	61155	STS119dc053	20090319/144606	5	0319/170931	180441
153	61156	STS119dc053	20090319/144606	4	0319/180514	183844
154	61170	STS119dc054	20090319/162359	3	0319/183921	184651
155	61167	STS119dc054	20090319/162359	5	0319/184729	193759
156	61168	STS119dc054	20090319/162359	4	0319/193831	201531
157	61175	STS119dc055	20090319/180250	3	0319/201602	204452
158	61172	STS119dc055	20090319/180250	5	0319/204531	212421
159	61173	STS119dc055	20090319/180250	4	0319/212500	215340
160	61180	STS119dc056	20090319/195852	3	0319/215411	222051
161	61177	STS119dc056	20090319/195852	5	0319/222131	225951
162	61178	STS119dc056	20090319/195852	4	0319/230309	233309

163 61179 STS119dc056 20090319/195852 3 0319/233347 234007